Notice of Allowability	Application No.	Applicant(s)	
	09/767,124	OBERSCHMIDT ET AL.	
	Examiner	Art Unit	
	Arnold M Kinkead	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *09-26-03*.
2. ☒ The allowed claim(s) is/are *21,23,26-28,30,33 and 34*.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
   (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

8. ☒ CORRECTED DRAWINGS must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No. ____.
   (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
   (c) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. 10-03.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1☒ Notice of References Cited (PTO-892)
2☐ Notice of Informal Patent Application (PTO-152)
3☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
4☒ Interview Summary (PTO-413), Paper No.____ .
5☐ Information Disclosure Statements (PTO-1449), Paper No. ____.
6☒ Examiner's Amendment/Comment
7☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
8☐ Examiner's Statement of Reasons for Allowance
9☐ Other .

1. An examiner' s amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner' s amendment was given in a telephone interview with Mr. Dennis M. Smid on Oct. 17, 2003.

The application has been amended as follows:

IN THE CLAIMS

Claims 1-20 (Canceled previously)

--21. (Currently Amended) Demodulation structure for downconverting and demodulating a digitally modulated signal, comprising:

a local oscillator means for providing a local oscillator signal,

a mixer means for mixing said local oscillator signal and said digitally modulated signal in order to obtain a mixed signal,

a low pass filter means for low pass filtering said mixed signal from said mixer means, and

an analog-to-digital converting means for converting the filtered signal from said low pass filter means into a downconverted and demodulated digital signal,

whereby said local oscillator signal is set in respect to said digitally modulated ~~digital~~ signal so that said downconverted and demodulated digital signal output from said analog-to-digital converting means comprises two serially arranged information parts, and

wherein said digitally modulated signal is modulated in a signal band having a center frequency and said local oscillator signal has a center frequency, which is, in respect to said center frequency of the signal band, offset by half of the signal band width of the digitally modulated ~~digital~~ signal.--

--22. (Canceled)

--23. (Previously Presented) Demodulation structure according to claim 21, characterized in, that said digitally modulated signal is I/Q-modulated and said two serially arranged information parts comprised in said downconverted and demodulated digital signal are an I-part and a Q-part of the I/Q-modulated digital signal.--

--24. (Canceled)

--25. (Canceled)

--26. (Currently Amended) Demodulation structure for downconverting and demodulating a digitally modulated signal, comprising:

a local oscillator means for providing a local oscillator signal,

a mixer means for mixing said local oscillator signal and said digitally modulated signal in order to obtain a mixed signal,

a low pass filter means for low pass filtering said mixed signal from said mixer means, and

an analog-to-digital converting means for converting the filtered signal from said low pass filter means into a downconverted and demodulated digital signal,

whereby said local oscillator signal is set in respect to said digitally modulated ~~digital~~ signal so that said downconverted and demodulated digital signal output from said analog-to-digital converting means comprises two serially arranged information parts whereby said local oscillator signal is modulated with at least two modulation states having different phases during the symbol period of the digitally modulated ~~digital~~ signal,

a modulation control means for supplying a modulation signal to said local oscillator means in order to internally modulate the local oscillator signal with said at least two modulation states; and

a band pass filter for band pass filtering said modulated local oscillator signal.--

--27. (Currently Amended) Demodulation structure according to claim 26, characterized in, that said band pass filter has a center frequency corresponding to the center frequency and a bandwidth corresponding to the bandwidth of the signal band of the digitally modulated ~~digital~~ signal.--

--28. (Currently Amended) Method for downconverting and demodulating a digitally modulated signal, comprising the steps of:

providing a local oscillator signal,

mixing said local oscillator signal and said digitally modulated signal in order to obtain a mixed signal,

low pass filtering said mixed signal, and

analog-to-digital converting the filtered signal into a downconverted and demodulated digital signal,

whereby said local oscillator signal is set in respect to said digitally modulated ~~digital~~ signal so that said downconverted and demodulated digital signal comprises two serially arranged information parts, and

wherein that said digitally modulated signal is modulated in a signal band having a center frequency and said local oscillator signal has a center frequency, which is, in respect to said center frequency of the signal band, offset by half of the signal band width of the digitally modulated ~~digital~~ signal.--

--29. (Canceled)

--30. (Previously Presented) Method according to claim 28, characterized in, that said digitally modulated signal is I/Q-modulated and said two serially arranged information parts comprised in said downconverted and demodulated digital signal are an I-part and a Q-part of the I/Q-modulated digital signal.--

--31. (Canceled)

--32. (Canceled)

--33. (Currently Amended) Method for downconverting and demodulating a digitally modulated signal, comprising the steps of:

providing a local oscillator signal,

mixing said local oscillator signal and said digitally modulated signal in order to obtain a mixed signal,

low pass filtering said mixed signal,

analog-to-digital converting the filtered signal into a downconverted and demodulated digital signal,

whereby said local oscillator signal is set in respect to said digitally modulated ~~digital~~ signal so that said downconverted and demodulated digital signal comprises two serially arranged information parts,

whereby said local oscillator signal is modulated with at least two modulation states having different phases during the symbol period of the digitally modulated ~~digital~~ signal,

whereby the local oscillator signal is internally modulated with said at least two modulation states by means of a supplied modulation signal, and

whereby said two different modulation states have the same magnitude and a 90 degree phase shift in respect to each other, and further comprising the step of

band pass filtering said modulated local oscillator signal.--

--34. (Currently Amended) Method according to clam 33, characterized in, that said band pass filter step uses a center frequency corresponding to the center frequency fc and a bandwidth corresponding to the bandwidth of the signal band of the digitally modulated ~~digital~~ signal.--

DRAWING AMENDMENTS

In Fig. 10, add the legend " PRIOR ART."

REMARKS

Telephone conferences between the Examiner and Dennis Smid (one of the applicants' undersigned attorneys) were held on October 17 and 20, 2003. The applicants and Mr. Smid wish to thank the Examiner for his time and consideration for such conferences.

Claims 1-20, 22, 24, 25, 29, 31, 32 have been canceled. Claims 23 and 30, and amended claims 21, 26, 27, 28, 33, and 34 are in this application.

Claims 21, 26, 27, 28, 33, and 34 have been amended herein so as to incorporate the changes discussed during the October 17th and 20th interviews.

As also discussed during the October 17th and 20th interviews, Fig. 10 has been amended to incorporate the legend "PRIOR ART." Further, and as also discussed during the October 17th and 20th interviews, such change will be submitted in a formal drawing at a later date.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnold M Kinkead whose telephone number is 703-305-3486. The examiner can normally be reached on Mon-Fri, 8:30 am -5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner' s supervisor, Robert Pascal can be reached on 703-308-4909. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Arnold M Kinkead
Primary Examiner
Art Unit 2817

Arnold Kinkead
Oct. 17, 2003